REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Non-elected claims 13-35 and 41-55 have been canceled without prejudice. Claims 1 and 36-40 have been amended. Support for these amendments can be found at page 10, line 16 through page 11, line 5, and Figures 27 and 28. Monomolecular films can bind to fine particles and monomolecular films can bind to substrates through functional groups included in R1 and R2, respectively. (Page 10, lines 33-37). R1 and R2 each comprise an alkyl chain having a functional group. (Page 10, lines 33-37). As indicated in Figures 27 and 28, R-1 and R-2 can have additional functional groups as well. These additional functional groups can react with each other to bind R-1 and R-2, thereby aligning the fine particles on the substrate. Figure 9 also illustrates the first and second organic coating films bound to each other, each film having two functional groups. Claims 1-12 and 36-40 remain pending.

Allowable Subject Matter

The Examiner found claims 7-8 contain allowable subject matter. Applicants thank the Examiner for indicating allowable subject matter.

Claim Rejections Under 35 U.S.C. § 103

Natan In View Of Gun

Claims 1-6, 9-10, and 12 were rejected under 35 U.S.C. § 103 as obvious over Natan (U.S. Pat. No. 5,609,907) in view of Gun (U.S. Pat. No. 5,294,252). Applicants respectfully traverse this rejection.

Claim 1 requires a first monomolecular organic coating film having a first and a second functional group, wherein the first functional group binds to fine particles. Claim 1 also requires a second monomolecular organic coating film having a third and fourth functional group, wherein the fourth functional group is different than the second functional group, and the third functional group binds to the substrate. The second functional group forms a bond with the fourth functional group to align the fine particles on the substrate.

Natan is directed towards the preparation of self-assembled metal colloid monolayers used in surface enhanced Raman scattering ("SERS"). (Col. 1, ll. 7-40). Natan teaches a substrate on which an organic film has been polymerized or deposited. (Col. 3, lines 42-45). Natan teaches that noble metal surfaces have "an affinity" for moieties contained within the

organic film, whereby the noble metal colloidal particles can be immobilized on the substrate. (Col. 3, lines 39-47). Nowhere, however, does Natan teach a first monomolecular organic coating film, bound to fine particles, having a functional group and a second monomolecular organic coating film, bound to a substrate, having a different functional group, wherein these two functional groups can bind to one another, thereby aligning the fine particles.

Gun is directed to a non-aqueous coating composition that can be used to form a hydrophobic film on a substrate. (Col. 1, lines 29-36). This provides the substrate with hydrophobic properties, such as water-repellency. (Col. 1, lines 11-18). There is no indication that this hydrophobic functional group reacts with the functional group of another organic film. Thus, there is no teaching or suggestion that the monomolecular film taught by Gun could be used to align the fine particles on the substrate, as required by claim 1. Accordingly, nowhere in Natan or Gun is there a suggestion of a first monomolecular organic coating film, bonded to fine particles, having a functional group and a second monomolecular organic coating film, bonded to the substrate, having a functional group different than the first monomolecular coating film, wherein the functional groups bind to align the fine particles on the substrate. For at least this reason, Natan and Gun fail to render claim 1 obvious.

In addition, there is no motivation to replace the organic film taught by Natan with the hydrophobic film taught by Gun. Nor is there any suggestion that the monomolecular film taught by Gun would even function as the organic film used under the teachings of Natan. For at least these reasons as well, Natan in view of Gun fails to render claim 1 obvious.

Claims 2-6, 9-10, and 12 depend from claim 1, an allowable base claim. For at least this reason, Applicants respectfully contend Natan in view of Gun fails to render these claims obvious as well.

Nguyen In View Of Gun

Claims 1, 4, 9-10, and 12 were rejected under 35 U.S.C. § 103 as obvious over Nguyen (WO 82/02403) in view of Gun (U.S. Pat. No. 5,294,252). Applicants respectfully traverse this rejection.

Nguyen is directed to a photopolymerizable composition for coating substrates with an abrasion resistant, transparent film. (Page 1, lines 3-6). Nguyen teaches the immobilization of particles on an organic coating matrix. (Page 18, lines 10-19). Nowhere, however, does Nguyen

teach a first monomolecular organic coating film, bound to fine particles, having a functional group and a second monomolecular organic coating film, bound to a substrate, having a different functional group, wherein these two functional groups can bind to one another, thereby aligning the fine particles.

Moreover, as recognized by the Examiner, Nguyen fails to teach a monomolecular film for use as the organic coating layer. As previously discussed, nothing in the prior art suggests that the monomolecular film taught by Gun would be useful in the invention of claim 1. For at least this reason, Nguyen and Gun fail to render claim 1 obvious.

In addition, there is no reason why one having ordinary skill in the relevant art would replace the organic coating taught by Nguyen with the hydrophobic monomolecular film taught by Gun. Nor would one having ordinary skill in the art consider the teachings of Gun reasonably pertinent to the production of the abrasion resistant, transparent film of Nguyen. For these reasons, one having ordinary skill in the art would not modify the teachings of Nguyen with the teachings of Gun. Applicants respectfully request the withdrawal of this rejection.

Claims 4, 9-10, and 12 depend from claim 1, an allowable base claim. For at least this reason, Applicants respectfully contend Nguyen in view of Gun fails to render these claims obvious as well.

Hilden In View Of Gun

Claims 1 and 11 were rejected under 35 U.S.C. § 103 as obvious over Hilden (U.S. Pat. No. 4,737,419) in view of Gun (U.S. Pat. No. 5,294,252). Applicants respectfully traverse this rejection.

Hilden is directed to a magnetic recording disk having a dispersion of magnetic particles within an organic binder as the magnetic coating on the disk substrate. (Col. 1, lines 11-17). As recognized by the Examiner, the coating surrounding the particles is the same as the coating on the disc. Thus, Hilden fails to teach or suggest a first monomolecular organic coating film, bonded to the fine particles, having a functional group and a second monomolecular organic coating film, bonded to the substrate, having a different functional group, wherein these two functional groups can bind to one another, thereby aligning the fine particles on the substrate.

As previously discussed, Gun fails to teach this feature of claim 1 as well. For at least this reason, Hilden and Gun fail to render claim 1 obvious.

In addition, one having ordinary skill in the art would not look to the teachings of Gun in order to resolve problems in the area of coatings for magnetic recording disks. There is no motivation to replace the organic binder with the monomolecular film taught by Gun. Accordingly, the Applicants respectfully contend the teachings of Hilden cannot be combined with the teachings of Gun. Applicants respectfully request the withdrawal of this rejection.

Claim 11 depends from claim 1, an allowable base claim. For at least this reason, Applicants respectfully contend Natan in view of Gun fails to render claim 11 obvious as well.

Sasaki In View Of Natan And Gun

Claims 36-38 were rejected under 35 U.S.C. § 103 as obvious over Sasaki (U.S. Pat. No. 6,404,602) in view of Natan (U.S. Pat. No. 5,609,907) and in further view of Gun (U.S. Pat. No. 5,294,252). Applicants respectfully traverse this rejection.

The rejection relies on Natan and Gun for reasons similar to those relied upon in the rejection of claim 1. Accordingly, the arguments presented with respect to claim 1 equally apply to this rejection. Applicants do not concede the relevance of Sasaki or its suitability for combination with the teachings of Natan and Gun. For at least the reasons discussed with respect to claim 1, Applicants respectfully contend Sasaki in view of Natan and Gun fails to render claims 36-38 obvious.

Taguchi In View Of Natan and Gun

Claims 39-40 were rejected under 35 U.S.C. § 103 as obvious over Taguchi (U.S. Pat. No. 6,465,432) in view of Natan (U.S. Pat. No. 5,609,907) and further in view of Gun (U.S. Pat. No. 5,294,252). Applicants respectfully traverse this rejection.

The rejection relies on Natan and Gun for reasons similar to those relied upon in the rejection of claim 1. Accordingly, the arguments presented with respect to claim 1 equally apply to this rejection. In addition, Applicants do not concede the relevance of Taguchi or its suitability for combination with the teachings of Natan and Gun. For at least the reasons discussed with respect to claim 1, Applicants respectfully contend Taguchi in view of Natan and Gun fails to render claims 39-40 obvious.

In view of the above, Applicants respectfully request reconsideration of the application in the form of a Notice of Allowance.

Respectfully submitted,

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